

REMARKS

Applicant notes with appreciation the Examiner's withdrawal of the §103 rejection, and would like to thank her for the guidance provided in the telephone interview of April 5, 2004. In view of the amendments submitted herewith, Claims 57-58 are cancelled. The claims now pending are 23, 51-56 and 59-61. In addition to the amendments made to claim 23, various amendments were made to other claims to correct claim dependencies and ensure proper antecedent basis. The paragraph beginning at line 14 on page 13 has been replaced to correct a typographical error. The declaration of Mark I. Greene, M.D., Ph.D. is submitted under Rule 1.132 in connection with this response. Dr. Greene is an expert in the field of immunology.

Rejections under 35 U.S.C. §112

Claims 23 and 51-61 were rejected under 35 U.S.C. §112, first paragraph, as containing subject matter that was not described in the specification in such a way so as to convey that the inventor had possession of the claimed invention. Applicant respectfully submits that this rejection is rendered moot in view of the amendments to Claim 23.

As amended, Claim 23 now recites "An isolated cell having a lipidated protein incorporated into the cell membrane, said lipidated protein having bound thereto a fusion protein, said fusion protein consisting of a first domain and a second domain, said second domain encoding a protein having a costimulatory, inhibitory or adhesion function." No new matter is added; these functions are clearly described throughout the application and previously appeared in dependent claims, Claims 57 and 58.

The Examiner suggested in the telephone interview that Claim 23 reads on naturally occurring cells. Applicant submits that Claim 23 does not read on naturally occurring cells: it refers to "isolated" cells, and it recites "fusion" proteins, which are understood as being man-made.

As set forth in the declaration of Dr. Mark Greene, the terms "costimulatory", "inhibitory" and "adhesion" are well-known in the art, and each of these categories of protein was well-characterized and understood at the time the present application was filed, both in terms of structure and mechanism of action. Applicant is enclosing copies of the references referred to in the declaration, all of which clearly establish that these terms were known in the art at the time the application was filed. The specification of the present application provides ample support for claims covering these categories of proteins, including a description of how to make and use the cells of Claim 23.

As also established in the declaration of Dr. Greene, the metes and bounds of these categories are clear and unambiguous, and numerous assays exist which allow one skilled in the art to determine if a particular protein is costimulatory, inhibitory or has an adhesion function. Thus, Applicant has clearly conveyed that, as of the filing date of the application, he was in possession of the complete invention, as required under the holding of *Vas-Cath. Inc. v. Mahurkar*, 935 F. 2d 1555 (Fed. Cir. 1991).

The Examiner appears to assert that the claims of the present invention do not meet the enablement portion of §112, although the nature of this rejection is not entirely clear as it is embedded in the Examiner's written description analysis. Applicant disagrees with this assertion in so far as it pertains to the current Claim 23. As set forth in Dr. Greene's declaration, one skilled in art can easily follow the description provided in the specification to make the cells of Claim 23. The description provides ample information on how to make the fusion proteins, how to transfer the fusion proteins to a cell population, and how to use the cells of the present invention in the treatment of various diseases. Applicant respectfully submits that Claim 23 is fully enabled.

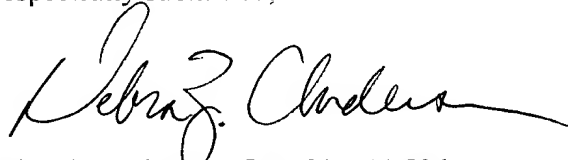
Claims 23 and 51-61 were rejected under §112, second paragraph, as indefinite for use of the terms "trans signaling" and "adhesion function". The term "trans signaling" has been removed from the claim; "adhesion function" is a term well-known in the art, as established in the declaration.

Applicant respectfully submits that all aspects of the requirements of §112 have been satisfied, and requests withdrawal of all §112 bases of rejection.

Summary

As all outstanding issues have been addressed, Applicant respectfully submits Claims 23, 51-56 and 59-61 are in condition for allowance; such action is respectfully requested at an early date.

Respectfully submitted,



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